IMM MOPR CONE Template Version 2
User Guide

Monitoring Analytics, LLC

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1 Description of Version 2

The CONE Template Version 2 is updated from the CONE Template to incorporate the updated investment tax credit (ITC) rules created by the Inflation Reduction Act (IRA) of 2022 and to incorporate changes related to the PJM effective load carrying capability (ELCC) rules.

Supporting documentation for MOPR requests should be included in the CMS Documents section of the RPM Requests module in MIRA.

2 Overview

The CONE Template is an Microsoft Excel based tool to allow capacity market sellers to determine a unit specific nominal levelized revenue requirements or gross cost of new entry (CONE) expressed in $ per MW-Day for a new entrant or uprate project. The CONE Template is consistent with the method used by PJM in establishing the MOPR default values. A capacity market seller may use the CONE Template to support a MOPR exception request.

Any cell in the CONE Template containing a formula has been locked to prevent user modification. Input cells are in blue font. Cells containing formulas are in black font.

The CONE Template is available on the Monitoring Analytics website, Tools page:
http://www.monitoringanalytics.com/tools/tools.shtml

The posted CONE Template is populated with the Gross CONE CT MOPR default as a working placeholder for the input values.

3 Excel Settings

If the field descriptions in the CONE Template appear truncated, users should adjust the zoom level in Excel.

Users may need to adjust the Excel workbook calculation to find a more precise solution using Goal Seek. To do this, click File → Options → Formulas → Change the Maximum Change Value to a smaller value (The default is .001) → Click OK.

4 CONE Template Sections

4.1 Section 1 General Project Information

Section 1 collects general project information. It is important that the proper Start of Construction and Start of Operation years are input so that the appropriate investment tax credits (ITC) and first year bonus depreciation are applied correctly to the gross CONE calculation. Phase out of ITC allowances for ITC eligible resources as well as the stepdown of first year bonus depreciation percent are dependent upon the inputs in cells C23 and C24.

Please note that changing the Resource Type or Technology fields after data have been input could trigger warnings to be displayed for these fields:

- Section 1: EFORd, Capacity Interconnection Rights, ELCC Class Rating, ELCC Performance Adjustment, Capacity Value Factor, Forecast Pool Requirement, Annual Degradation, and Tax Credit Election.
- Section 7: Customize Depreciation Schedule, Customize ITC Basis, and Custom ITC Basis

Changing the Tax Credit Election field after data have been input could trigger warnings to be displayed for these fields:

- Section 1: Start of Construction
- Section 9: Production Tax Credits

4.2 Section 2 Capital Costs

Section 2 collects customary capital cost category data in thousands of dollars. The Other category in cell C21 may be used to true up the total project cost if there are one or more unique cost categories that differ from the Section 2 categories.

4.3 Sections 3 and 4 Fixed O&M Expenses

Section 3 collected customary fixed operation and maintenance (O&M) expense category data in thousands of dollars. The Other category in cell C15 may be used to true up the total fixed O&M expenses if there are one or more unique cost categories that differ from the Section 3 categories.

If the Customize Fixed O&M dropdown selection in cell C19 of Section 3 is "No," the first year fixed O&M expenses is escalated annually for the project life based on the escalation inputs entered in cells C22 through C25.

If the Customize Fixed O&M dropdown selection in cell C19 of Section 3 is "Yes," Section 4 must be completed in thousands of dollars for the life of the project.

A customizable fixed O&M option is provided to accommodate the annual costs of existing O&M contracts or negotiated property lease or property tax agreements that may have irregular values and/or varying escalation rates from year to year.

4.4 Section 5 and 6 Taxes, Project Financial Structure, and Loan Schedule

Section 5 collects the tax and project financial structure information to determine the after tax weighted average cost of capital (ATWACC) in cell C15.

If the Customize Loan Schedule dropdown selection in cell C16 of Section 5 is "No," the CONE Template determines the gross CONE revenue requirements on an all equity basis at a discount rate equal to the ATWACC.

If the Customize Loan Schedule dropdown selection in cell C16 of Section 5 is "Yes," annual principal and interest payments for the project must be entered in Section 6. The CONE Template provides five distinct loan schedules for scenarios where loans are obtained from multiple sources. Please note that the total principal in cell C4 of Section 6 should equal the equity amount in cell C10 of Section 5. If not, a "Check Principal Payment Values" message will appear in cell B2 of Section 6.

The CONE Template determines the gross CONE revenue requirements based on the equity amount in cell C10 of Section 5 at a discount rate equal to the target IRR percent in cell C11 of Section 5. The determination of interest payments should assume the debt interest rate entered in cell C14 of Section 5.

4.5 Section 7 and 8 Depreciation and Federal Income Tax Credits (ITC)

The CONE Template uses as the default 100% first year bonus depreciation with the appropriate annual stepdown schedule based on the start of operation year entered in cell C24 of Section 1.

If the Customize Depreciation Schedule dropdown selection in cell C8 of Section 7 is "Yes," annual deprecation amounts in thousands of dollars must be entered in Section 8. The CONE Template provides eight distinct depreciation schedules for input. Please note that the total depreciation amount in cell C24 of Section 8 should equal the depreciable basis amount in cell C5 of Section 7. If not, a "Check Custom Depreciation Values" message will appear in cell B2 of Section 8.

If the Customize ITC Basis dropdown selection in cell C11 of Section 7 is "Yes," a custom ITC basis must be entered in cell C12 of Section 7.

4.6 Section 9 Energy and Ancillary Service (EAS) Revenues

Section 9 collects net energy and ancillary services (E&AS) revenues and other revenues in terms of $ per MW-year. If the capacity market seller is using its own model to develop these estimates, documentation to support these values should be provided.

4.7 Section 10 Solution and Sell Offer Summary

In Section 10, click on the Data tab → What-If Analysis → Goal Seek. The Goal Seek dialog box appears. Enter these parameters:

- Set cell: C4
- To value: 0
- By changing cell: C7

Click OK. Goal Seek will produce the resulting gross CONE revenue requirement in $ per MW-day ICAP in cell C7. The Goal Seek Status dialog box appears and should say "Goal Seeking with

Cell C4 found a solution." If it states this, click OK. If it states otherwise, click cancel and double check the inputs in Sections 1-9. Clicking cancel will revert back to the previous values.

Total net revenues from Section 9 are subtracted from gross CONE to determine the minimum sell offer in $ per MW-day ICAP in cell C9. The minimum sell offer in $ per MW-day UCAP is determined in cell C10 by applying either the EFORd for non-ELCC generation, the capacity value factor for ELCC resources, or the forecast pool requirement for demand resources and energy efficiency resources.

If the model is in a state of not being solved for the gross CONE revenue requirements, a "Model Not Solved" message will appear in cell B1.